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PRESENTATION SYSTEM

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to a
presentation system having a function of displaying

5   contents of presentation on a screen and a loudspeaker
device for outputting a speech. In particular, the
present invention relates to a system in which an
auditor or a questioner can debate and discuss by using
input devices, such as a cursor key and a microphone

10   included in a mobile terminal device of the auditor or
the questioner and sharing the presentation screen and
the loudspeaker device, and can acquire information
stored in a computer for presentation into the mobile
terminal device.

15   DESCRIPTION OF THE RELATED ART

Heretofore, when performing presentation,
there has been adopted a method of printing contents of
presentation on a transparent film, projecting the
printed contents onto a screen by using an overhead

20   projector, and conveying the contents to a larger
number of auditors. In the case where there is an
alteration in the contents of presentation, recreation
of a transparent film is needed and modification is not
easy in this method. In creation of presentation, it

is also possible to use a computer. Finally, however, work of printing the contents onto a transparent film is caused, and modification is not easy in the same way. Furthermore, repeated alterations lead to waste

5 of transparent films as well. In addition, it is necessary to carry a large quantity of transparent films at the time of presentation. In a presentation method that has become to be used in recent years in order to improve such a situation, the contents of

10 presentation created by the computer is not output to the transparent film, but the contents are transferred to a presentation computer in a place of meeting via a removable disk, a memory and a network, and displayed directly on a screen by using a large screen TV or a

15 video projector. By using this method, it has become possible to perform dynamic presentation using an animation effect, instead of the static content display using a transparent film.

When performing the presentation with a

20 computer used, the work of transferring presentation data of a lecturer to a presentation computer in a place of lecture meeting becomes necessary. A method for transferring presentation data easily by using infrared light or wireless communication is disclosed

25 in JP-A-2000-222163 entitled "data display system and data display control method in data display system." It is also shown that data exchange can be conducted between computers of a lecturer and a questioner by

using this method.

The above-described presentation method is effective in saving labor in editing work, improving the presentation effect, and reducing consumption of

5 resources such as transparent films. At the time of actual presentation, however, there are problems. Especially in talking back and force between the questioner and the lecturer at the time of questions and answers, it is necessary to aurally indicate

10 presentation contents corresponding to a question to the lecturer. If the meeting place is large, it is necessary for a questioner to use a microphone and output speech from a loudspeaker device. The debate or discussion is often interrupted due to the time

15 required for the aural indication and carrying the microphone.

Although the presentation contents are electronic data on the computer, the lecturer needs to make a handwritten note in order to store the contents,

20 resulting in a problem.

In the data exchange method shown in JP-A- 2000-222163, the form of data that can be handled by a computer of each person is not taken into consideration. Especially in the case where data

25 transfer between mobile terminal devices for which there are many data forms from manufacturer to manufacturer is performed, therefore, the data cannot be utilized.

SUMMARY OF THE INVENTION

With respect to the problems caused at the time of questions and answers and the data exchange, an object of the present invention is to reduce the unnecessary labor and time caused by debate or discussion between a lecturer and a questioner and work of conversion between different data, and thereby advance the presentation efficiently.

In order to achieve the object, the present invention has the following features.

In accordance with a first aspect of the present invention, a presentation system includes a mobile terminal device having an input unit, a radio transmitter circuit for radio-transmitting input information from the mobile terminal device, a radio receiver circuit for receiving the transmitted input information at a presentation computer, and a computer program for displaying the received input information on a screen of the presentation computer.

In accordance with a second aspect of the present invention, a presentation system includes a mobile terminal device having an input/output unit, a radio transmitter-receiver circuit for radio-transmitting input information from the mobile terminal device and receiving presentation information, a radio transmitter-receiver circuit for receiving the transmitted input information at the presentation computer and transmitting the presentation information

from the presentation computer, and a computer program for displaying the received input information on a screen of the presentation computer.

In accordance with a third aspect of the

5 present invention, a presentation system includes a mobile terminal device having a microphone, a radio transmitter circuit for radio-transmitting input speech from the mobile terminal device, a radio receiver circuit for receiving the transmitted speech at a

10 presentation loudspeaker unit, and a circuit for outputting the received speech from the presentation loudspeaker unit.

In accordance with a fourth aspect of the present invention, a presentation system includes a

15 mobile terminal device having an input/output unit, a radio transmitter-receiver circuit for radio-transmitting input information from the mobile terminal device and receiving presentation information, a radio transmitter-receiver circuit for receiving the

20 transmitted input information at the presentation computer and transmitting the presentation information from the presentation computer, a computer program for displaying the received input information on a screen of the presentation computer, and an information format

25 transforming unit for transforming the presentation information to a format that can be handled by each mobile terminal device.

In the configuration having the first aspect

of the present invention, input information from a mobile terminal device having an input unit can be transmitted to a presentation computer and displayed on a screen. For example, when putting a question

5 concerning the presentation, therefore, the questioner can use the input unit included in the individual mobile terminal device carried daily by the questioner in order to operate a cursor on the presentation screen. As a result, the questioner can promptly point

10 out to a lecture content about which the questioner desires to put a question, without causing misunderstanding.

In the configuration having the second aspect of the present invention, presentation information from

15 the presentation computer can be acquired at a mobile terminal device, in addition to the configuration having the first aspect. As a result, presentation information specified by using, for example, an input unit included in the mobile terminal device can be

20 acquired easily.

In the configuration having the third aspect of the present invention, input information from a mobile terminal device having a microphone is transmitted to a loudspeaker unit for presentation and

25 output thereby. For example, when putting a question to a lecturer who has performed presentation, it becomes unnecessary to carry a microphone to the questioner. As a result, a waste of time in questions

and answers can be avoided.

In the configuration having the fourth aspect of the present invention, presentation information in the presentation computer can be transformed to a format of information that can be handled by a mobile terminal device, in addition to the configuration having the second aspect. For example, therefore, the acquired presentation information can be perused and edited on the mobile terminal device on the spot.

Other objects, features and advantages of the invention will become apparent from the following description of the embodiments of the invention taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a configuration diagram showing a first embodiment of a presentation system according to the present invention;

FIG. 2 is a configuration diagram showing a second embodiment of a presentation system according to the present invention;

FIG. 3 is a configuration diagram showing a third embodiment of a presentation system according to the present invention;

FIG. 4 is a configuration diagram showing a fourth embodiment of a presentation system according to the present invention;

FIG. 5 is a flow chart showing an operation

of connection between a presentation system and a

mobile terminal device;

FIG. 6 is a flow chart showing an operation

conducted at the time of disconnection between a

5   presentation system and a mobile terminal device;

FIG. 7 is a flow chart showing an operation

conducted when a mobile terminal device orders a

presentation system to move a cursor;

FIG. 8 is a flow chart showing an operation

10 of selecting and acquiring a data file for

presentation;

FIG. 9 is a flow chart showing an operation

of a presentation system conducted when a speech output

start is requested;

15   FIG. 10 is a flow chart showing an operation

of a presentation system conducted when a speech output

end is requested; and

FIG. 11 is a flow chart showing operations of

cursor movement and a speech output in a presentation

20 system.

DESCRIPTION OF THE EMBODIMENTS

Hereafter, embodiments of the present

invention will be described with reference to the

drawings.

25   FIG. 1 is a block diagram showing a first

embodiment of the present invention. In FIG. 1,

reference numeral 1 denotes a screen for lecture, 2 a

mobile terminal device for lecturer. Herein, a PDA
(Personal Digital Assistant) is used as the mobile
terminal device 2. Reference numeral 3 denotes a radio
transmitter-receiver unit for a lecturer PDA, 4 an
5 input unit for the PDA, 5 a computer for presentation,
6 a radio transmitter-receiver unit for the
presentation computer, 7 a cursor control unit, 8 a
cursor for lecturer, 9 a lecturer cursor identification
icon, 10 a PDA for a questioner, 11 a radio
10 transmitter-receiver unit for the questioner PDA, 12 a
cursor for the questioner, and 13 a questioner cursor
identification icon. If the PDA 2 transmits a link
establishment request to the presentation computer 5
via the radio transmitter-receiver unit for the
15 lecturer PDA 3, then the radio transmitter-receiver
unit for the presentation computer receives the
request, and the cursor control unit 7 displays the
lecturer cursor 8 on the lecturer screen 1. At this
time, a unique cursor identification information is
20 returned to the lecturer PDA 2 via the radio
transmitter-receiver unit 6, and the lecturer cursor
identification icon 9 is displayed on a screen of the
PDA 2. A link between the PDA 2 and the present system
is thus established. After the link has been
25 established, cursor identification information and
cursor position information are transmitted via the
radio transmitter-receiver units 3 and 6. The cursor
control unit 7 redraws a cursor corresponding to the

cursor identification information on the lecture screen 1, which is the lecturer cursor 8 in this case, according to the cursor position information.

Furthermore, by using a radio transmitter-receiver unit 6 capable of processing a plurality of link establishment requests, it is possible to display a plurality of cursors for lecturer and questioner on the lecture screen 1 and operate them from a plurality of PDAs. For example, the radio transmitter-receiver unit 6 accepts a link establishment request from the questioner PDA 10, and transmits it to the cursor control unit 7. The cursor control unit 7 determines identification information of a cursor that is not being used now on the lecture screen 1, and returns it to the questioner PDA 10 via the radio transmitter-receiver units 6 and 3. Processing conducted after the link establishment is the same as that conducted in the case where the lecturer PDA 2 is used.

According to the present embodiment, the cursors on the lecturer screen can be operated by using input units of the PDAs respectively owned by the lecturer and the questioner, respectively.

FIG. 2 is a block diagram showing a second embodiment of the present invention. In the present system, it is possible to acquire information concerning a lecture from the presentation computer into the lecturer PDA 2 and the questioner PDA 10, by adding a file acquisition unit 34 and a storage unit 35

to the presentation computer 5 having the configuration

of the first embodiment of the present invention. The

link establishment request and the cursor movement are

conducted in the same way as the first embodiment of

5   the present invention. For example, if the questioner

cursor 12 is moved to a place that indicates a storage

location of information in the presentation computer

and an information acquisition request is transmitted

to the presentation computer 5, then the cursor control

10   unit 7 transmits the specified information storage

location to the file acquisition unit 34. The file

acquisition unit 34 takes out specified information

from the storage unit 35, and the specified information

is taken in the questioner PDA 10 via the radio

15   transmitter-receiver units 6 and 11. By the way, the

technique of displaying materials stored in the storage

unit 35 on the lecture screen 1 is well known.

       According to the present embodiment, the

cursors 8 and 12 on the lecture screen 1 can be

20   operated by using the PDAs 2 and 10 respectively owned

by the lecturer and the questioner, respectively. In

addition, it becomes possible to take information

stored in the presentation computer 5 in the respective

PDAs 2 and 10 by using those cursors.

25   FIG. 3 is a block diagram showing a third

embodiment of the present invention. In FIG. 3,

reference numerals 1, 5, 6, 7, 8, 9 and 12 denote the

same components as those shown in FIG. 1. Reference

numeral 42 denotes a cellular telephone for a lecturer

as a mobile terminal device, 43 a radio transmitter-

receiver unit for the lecturer cellular telephone, 44

an input unit for the lecturer cellular telephone, 50

5   an information synthesis and separation unit, 51 a

microphone for the lecturer cellular telephone, 52 a

loudspeaker unit, 53 a speaker, and 60 a cellular

telephone for a questioner as a mobile terminal device.

The lecturer cellular telephone 42, the radio

10   transmitter-receiver unit 43 for lecturer cellular

telephone, and the input unit 44 for lecturer cellular

telephone shown in FIG. 3 correspond to the lecturer

PDA 2, the radio transmitter-receiver unit 3 for

lecturer PDA, and the input unit 4 for lecturer PDA

15   shown in FIG. 1, respectively. The lecturer cellular

telephone 42 differs from the lecturer PDA 2 in that

the lecturer cellular telephone 42 incorporates the

microphone 51. Information for operating the lecturer

cursor 8 and speech information input by the microphone

20   51 incorporated in the lecturer cellular telephone are

combined, and radio communication with the presentation

computer 5 is conducted. In FIG. 3, the link

establishment between the lecturer cellular telephone

42 and the presentation computer 5, and the movement of

25   the lecturer cursor are conducted in the same way as

the first embodiment of the present invention. Since

information transmitted from the lecturer cellular

telephone 42 includes a combination of the information

for moving the lecturer cursor and the speech input
from the microphone incorporated in the lecturer
cellular telephone, however, the information synthesis
and separation unit 50 for separating them is added

5 between the radio transmitter-receiver unit 6 for the
presentation computer and the cursor control unit 7.
The speech information separated by the information
synthesis and separation unit 50 is transferred to the
loudspeaker unit 52, and output by the speaker 53 in

10 the place of meeting.

    According to the present embodiment, the
cursors 8 and 12 on the lecture screen 1 can be
operated by using input units in the cellular
telephones 42 and 60 respectively owned by the lecturer

15 and the questioner, respectively. Speeches uttered to
the microphones incorporated in the cellular telephones
42 and 60 can also be output by using the loudspeaker
unit 52 and the speaker 53 in the place of meeting. In
the present embodiment, the file transfer function

20 described with reference to the second embodiment of
the present invention has been omitted. Of course,
however, the function may also be added.

    FIG. 4 is a block diagram showing a fourth
embodiment of the present invention. In the present

25 system, presentation information can be acquired in
information formats of the lecturer PDA 2 and the
questioner PDA 10, by adding an information format
transforming unit 70 corresponding to various

information formats between the file acquisition unit
34 and the radio transmitter-receiver unit 6 in the
presentation computer 5 having the configuration of the
second embodiment according to the present invention.

5   The link establishment request, the cursor movement and
the file acquisition method are conducted in the same
way as the first and second embodiments of the present
invention. At the time of link establishment, however,
the questioner PDA 10 also transmits an information

10   format that can be handled by the PDA at the same time.
Presentation information acquired from the storage unit
35 by the file acquisition unit 34 according to an
order from the questioner PDA 10 is transformed into a
suitable information format by the information format

15   transforming unit 70 in accordance with the information
format previously acquired at the time of link
establishment. The specified information is taken in
the questioner PDA 10 via the radio transmitter-
receiver units 6 and 11.

20   According to the present embodiment, the
transformation of the information format that can be
handled by the PDAs 2 and 10 respectively owned by the
lecturer and the questioner can be conducted in the
presentation computer 5. It becomes possible to peruse

25   and edit presentation information taken in on the
respective PDAs 2 and 10 on the spot.
         In FIG. 4, the information format
transforming unit 70 for transforming the information

format of presentation data stored in the storage unit

35 to the information format handled by the PDA 10 is

shown. By providing a format transforming software

program for the questioner PDA 10 in the information

5 format transforming unit 70, it becomes possible to

download predetermined data from the Internet.

With reference to a flow chart shown in FIG.

5, operation conducted at the time of connection

between the presentation system and the questioner PDA

10 10 will now be described.

Presentation system side having lecturer PDA

2:

1)   A connection request from the questioner PDA

10 is waited for (S501).

15   2)   If there is a connection request, then it is

determined whether number of connectable PDAs is now

exceeded. If exceeded, then a message "the number of

connectable PDAs has been exceeded" is returned to the

questioner PDA 10 (S502, S503, S504 and S505).

20   3)   If not exceeded, the presentation system

acquires a unique ID, which does not overlap the PDAs

now in connection, and a cursor image that can be

distinguished from other PDAs, from an ID management

table (not illustrated), and returns them to the

25 questioner PDA 10 (S504 and S506). On the ID

management table, the ID and the cursor image are

changed to "busy state."

4)   The cursor image transmitted to the

questioner PDA 10 is displayed on the actual lecture screen 1, and the processing of the connection from the questioner PDA 10 is completed (S507).

5) A connection request from other PDAs is
5 waited for (S501).

The questioner PDA 10 side:

1) A connection request from the user is waited for (S508).

2) If there is a connection request, then a
10 connection request is transmitted from the questioner PDA 10 to the presentation system, i.e. the radio transmitter-receiver unit 6 of the computer 5, and a response from the presentation system is waited for (S509, S510 and S511).

15 3) If timeout occurs, then it turns out a "connection failure" and a message for informing the user to that effect is output on the screen of the questioner PDA 10 (S512, S513, S514 and S515).

4) If the message "the number of connectable
20 PDAs has been exceeded" is received, then a message for informing the user to that effect is output on the screen (S516).

5) After the unique ID and the cursor image for the questioner PDA have been received, the received
25 cursor image is displayed on the questioner PDA 10 and the connection is completed.

With reference to a flow chart shown in FIG. 6, operation conducted at the time of disconnection

between the presentation system and the questioner PDA 10 will now be described.

Presentation system side:

1)   A disconnection request from the questioner PDA 10 is waited for (S601).

2)   If there is a disconnection request, then a cursor image that can be identified from an ID transmitted simultaneously is deleted from the lecture screen 1, and the ID and the cursor image are changed to the "ready state" on the ID management table (S602, S603 and S604).

3)   A message "disconnection completion" is transmitted to the questioner PDA 10, and the processing of disconnection from the questioner PDA 10 is completed.

4)   A disconnection request from other PDAs is waited for (S605 and S606).

The questioner PDA 10 side:

1)   A disconnection request from the user is waited for (S607).

2)   If there is a disconnection request, then a disconnection request is transmitted from the questioner PDA 10 to the presentation system, i.e. the radio transmitter-receiver unit 6 of the computer 5, and a response from the presentation system is waited for (S608 and S609).

3)   If timeout occurs, then it turns out a "connection failure" and a message for informing the

user to that effect is output on the screen of the questioner PDA 10 (S610, S611 and S612).

4)   If the message "disconnection completion" is received, then a cursor image on the screen of the questioner PDA 10 is deleted, and the disconnection processing is completed (S612 and S613).

With reference to a flow chart shown in FIG. 7, operation conducted when the presentation system is ordered to move the cursor by the questioner PDA 10 will now be described.

Presentation system side:

1)   A cursor movement request from the questioner PDA 10 is waited for (S701).

2)   If there is a cursor movement request, then it is determined whether an ID transmitted simultaneously is an ID that is now in use. If the ID transmitted simultaneously is an ID that is not now in use, then an "error" message is returned to the questioner PDA 10, and the processing is finished (S702, S703, S704 and S705).

3)   If the ID transmitted simultaneously is the correct ID, then a cursor on the lecture screen 1 is redrawn on the basis of simultaneously transmitted input information for the questioner PDA 10. For example, if the "upward" key is pressed, then the cursor image is shifted upward and redrawing is conducted (S704 and S706).

4)   After redrawing, an "acknowledgment" message

is transmitted to the questioner PDA 10, and the cursor movement processing is completed (S707).

5) A cursor movement request from other PDAs is waited for (S701).

The questioner PDA 10 side:

1) The questioner PDA 10 waits for the user to input cursor movement information by using the input unit thereon (S708).

2) If cursor movement information is input, then the questioner PDA 10 transmits an ID and cursor movement information now held thereby to the presentation system, and waits for a response from the presentation system (S709, S710 and S711).

3) If timeout occurs, then it turns out a "cursor movement failure" and a message for informing the user to that effect is output on the screen (S712 and S713).

4) If an "error" message is received, then the questioner PDA 10 regards the current connection as illegal, discards the ID held thereby, and deletes the cursor image on the screen as well (S714 and S715). If necessary, the processing is started from the "connection request" processing again (S501 in FIG. 5).

5) The "acknowledgment" message is received, and the cursor movement processing is completed (S716 and S717).

With reference to a flow chart shown in FIG. 8, operation of selecting and acquiring a data file for

presentation in the presentation system shown in FIGS. 2 and 4 will now be described.

Presentation system side:

1) A cursor request from the questioner PDA 10 is waited for (S801).

2) If there is a cursor request, then it is determined whether an ID transmitted simultaneously is an ID that is now in use. If the ID transmitted simultaneously is an ID that is not now in use, then an "error" message is returned to the questioner PDA 10, and the processing is finished (S802, S803, S804 and S805).

3) If the ID transmitted simultaneously is the correct ID and the simultaneously transmitted input information of the questioner PDA 10 indicates "selection," then it is determined whether the current position of the cursor is the position indicating the link information of a data file (S806 and S807).

4) If the cursor is not in a position representing link information of a data file, then the cursor information is disregarded. If the cursor is in the position representing link information of a data file, then a storage location of the pertinent data file is acquired, and the pertinent data file is acquired from the pertinent storage location in the storage unit 35 connected to the presentation system and transmitted to the questioner PDA 10 (S808).

5) After the transmission of the data file has

been finished, an "acknowledgment" message is transmitted to the questioner PDA 10 and the data file transmission processing is completed (S809).

6)   A subsequent data file selection & acquisition request from a questioner PDA 10 is waited for (S801).

The questioner PDA 10 side:

1)   The questioner PDA 10 waits for the user to input cursor information by using the input unit thereon (S810).

2)   If cursor movement information is input, then the questioner PDA 10 transmits an ID and cursor movement information now held thereby to the presentation system, and waits for a response from the presentation system (S811, S812 and S813).

3)   If timeout occurs, then it turns out a "data file selection & acquisition failure" and a message for informing the user to that effect is output on the screen (S814 and S815).

4)   If an "error" message is received, then the questioner PDA 10 regards the current connection as illegal, discards the ID held thereby, and deletes the cursor image on the screen as well (S816 and S817). If necessary, the processing is started from the "connection request" processing again (S501 in FIG. 5).

5)   If the data file can be selected correctly, then the data file is transmitted from the presentation system and consequently reception processing is

conducted (S816 and S818).

6)   The "acknowledgment" message is received, and
the data file selection & acquisition processing is
completed (S820).

With reference to a flow chart shown in FIG.
9, operation of the presentation system shown in FIG. 3
at the time of speech output start request will now be
described.

Presentation system side:

1)   A speech output start request from the
questioner cellular telephone 60 is waited for (S901).

2)   If something is transmitted from the
questioner cellular telephone 60, then it is determined
whether an ID transmitted simultaneously is an ID that
is now in use. If the ID transmitted simultaneously is
an ID that is not now in use, then an "error" message
is returned to the questioner cellular telephone 60,
and the processing is finished (S902 and S903).

3)   If the ID transmitted simultaneously is the
correct ID and the simultaneously transmitted input
information of the questioner cellular telephone 60
indicates "speech output start," then it is determined
whether the current number of connections permitted to
output the speech is exceeded (S902, S904 and S905).

4)   If the number of permitted connections is
exceeded, then a message "the number of permitted
connections has been exceeded" is transmitted to the
questioner cellular telephone 60 (S906). If not

exceeded, then a "speech output start permission"
message is returned, and the processing for the speech
output start request is completed.

     5)   A subsequent speech output start request from
a questioner cellular telephone is waited for (S907).

        The questioner cellular telephone 60 side:

     1)   The questioner cellular telephone 60 waits
for the user to conduct operation for indicating
"speech output start" by using the input unit thereon
(S908).

     2)   If "speech output start" is input, then the
questioner cellular telephone 60 transmits an ID now
held thereby and a message representing "speech output
start" to the presentation system, and waits for a
response from the presentation system (S909, S910 and
S911).

     3)   If timeout occurs, then it turns out a
"speech output start failure" and a message for
informing the user to that effect is output on the
screen (S912 and S913).

     4)   If an "error" message is received, then the
questioner cellular telephone 60 regards the current
connection as illegal, discards the ID held thereby,
and deletes the cursor image on the screen as well
(S914 and S915). If necessary, the processing is
started from the "connection request" processing again
(S501 in FIG. 5).

     5)   If the message "the number of permitted

connections has been exceeded" is received, then it

means that the "speech output" has not been permitted,

and the questioner cellular telephone 60 conducts

nothing ((S916 and S917). If necessary, the processing

5 is started from the "connection request" processing

again (S501 in FIG. 5).

6) If the "speech output start permission"

message is received, then the "speech output mode" in

the questioner cellular telephone 60 is set to "ON" and

10 the speech output start request processing is

completed. If necessary, for example, a display

indicating "speech is being output" is effected on the

screen of the questioner cellular telephone 60 (S917

and S918).

15 With reference to a flow chart shown in FIG.

10, operation of the presentation system shown in FIG.

3 at the time of speech output end request will now be

described.

Presentation system side:

20 1) A speech output end request from the

questioner cellular telephone 60 is waited for (S1001).

2) If something is transmitted from the

questioner cellular telephone 60, then it is determined

whether an ID transmitted simultaneously is an ID that

25 is now in use. If the ID transmitted simultaneously is

an ID that is not now in use, then an "error" message

is returned to the questioner cellular telephone 60,

and the processing is finished (S1002 and S1003).

3)   If the ID transmitted simultaneously is the correct ID and the simultaneously transmitted input information of the questioner cellular telephone 60 indicates "speech output end," then a "speech output end acknowledgment" message is returned and the processing for the speech output end request is completed (S1004 and S1005).

4)   A subsequent speech output end request from a questioner cellular telephone is waited for (S1001).

The questioner cellular telephone 60 side:

1)   The questioner cellular telephone 60 waits for the user to conduct operation for indicating "speech output end" by using the input unit thereon (S1006).

2)   If "speech output start" is input, then the questioner cellular telephone 60 transmits an ID now held thereby and a message indicating "speech output end" to the presentation system, and waits for a response from the presentation system (S1007, S1008 and S1009).

3)   If timeout occurs, then it turns out a "speech output end failure" and a message for informing the user to that effect is output on the screen (S1010 and S1011).

4)   If an "error" message is received, then the questioner cellular telephone 60 regards the current connection as illegal, discards the ID held thereby, and deletes the cursor image on the screen as well

(S1012 and S1013). If necessary, the processing is started from the "connection request" processing again (S501 in FIG. 5).

5) If the "speech output end acknowledgement" message is received, then the "speech output mode" in the questioner cellular telephone 60 is set to "OFF" and the speech output end request processing is completed. If necessary, for example, a display representing "speech is being output" on the screen of the questioner cellular telephone 60 is deleted (S1014 and S1015).

With reference to a flow chart shown in FIG. 11, operation of cursor movement and speech output in the presentation system shown in FIG. 3 will now be described.

Presentation system side:

1) Transmission of "speech data" from the questioner cellular telephone 60 is waited for (S1101).

2) If any information is transmitted from the questioner cellular telephone 60, then it is determined whether an ID transmitted simultaneously is an ID that is now in use. If the ID transmitted simultaneously is an ID that is not now in use, then an "error" message is returned to the questioner cellular telephone 60, and the processing is finished (S1102 and S1103).

3) If the ID transmitted simultaneously is the correct ID and input information of the questioner cellular telephone 60 transmitted simultaneously is

"speech data," then speech decoding is conducted and speech outputting is conducted by using the loudspeaker (S1102, S1104, S1105 and S1106).

4)   If the input information is not "speech data," then processing is conducted in the "cursor movement operation (FIG. 7)" (S1107).

5)   Subsequent "speech data" from a questioner cellular telephone is waited for (S1101).

The questioner cellular telephone 60 side:

1)   The questioner cellular telephone 60 waits for the user to input "speech data" or "cursor movement information" by using the microphone and the cursor input unit of the questioner cellular telephone 60 (S1108).

2)   If the input information is not "speech data," then processing is conducted in the "cursor movement operation (FIG. 7)" (S1109, S1110 and S1111).

3)   If the input information is "speech data," then it is determined whether the current "speech output mode" is "ON." If the current "speech output mode" is "OFF," then the input speech data is not transmitted to the presentation system (S1110 and S1112).

4)   If the current "speech output mode" is "ON," then the "speech data" is encoded and transmitted to the presentation system, and a response is waited for (S1112, S1113 and S1114).

5)   If an "error" message is received, then the

questioner cellular telephone 60 regards the current

connection as illegal, discards the ID held thereby,

and deletes the cursor image on the screen as well

(S1115 and S1116). If necessary, the processing is

5 started from the "connection request" processing again

(S501 in FIG. 5).

6) If a "speech output completion" message is

received, then it is determined whether the "speech

output mode" of the questioner cellular telephone 60 is

10 "ON." If the "speech output mode" is "ON," then the

processing is repeated from the step S1112.

As heretofore described, the present

invention provides a configuration in which information

input by using an input unit included in a mobile

15 terminal device is transmitted to a presentation

computer and the presentation computer draws a cursor

on a presentation screen. As a result, a lecturer and

a questioner can easily specify a location on the

presentation screen, and it is possible to bring about

20 a better understanding between the lecturer and a

questioner.

In addition, by adding a storage device and a

file acquisition device to the configuration, the

questioner can easily acquire information opened to the

25 public concerning the presentation.

By adding a device for combining and

separating speech and cursor position information to

the presentation computer in the configuration, it

becomes possible to implement outputting speech supplied from a mobile terminal, such as a cellular telephone, having a speech input unit like a microphone, from a speaker by using a loudspeaker

5   device included in the presentation system. The labor and time required for a clerk in charge in the lecture meeting to move a microphone whenever a question is put can be reduced.

By adding an information form conversion

10 device to the configuration, presentation information opened to the public can be acquired in an information form that can be handled by an individual mobile terminal device.

It should be further understood by those

15 skilled in the art that although the foregoing description has been made on embodiments of the invention, the invention is not limited thereto and various changes and modifications may be made without departing from the spirit of the invention and the

20 scope of the appended claims.